

ABSTRACT OF THE DISCLOSURE

An apparatus is disclosed for producing an animation of a group including a plurality of members which are dynamically controlled. The apparatus includes a role assignment switchboard for assigning roles to the respective members of the group so as to achieve a layout specifying a particular group-level state; an optimum continuous controller for continuously determining the states of the respective members in a reference state in which the roles of the respective members are assigned by the role assignment switchboard; an optimum discrete role assigning unit for controlling the role assignment switchboard so as to perform the assignment of roles to the respective members in accordance with a command given from the outside and also in accordance with the current state of the group; and member state determining unit for determining the states of the respective members in accordance with a set of variables describing the dynamic characteristics of the respective members, a global disturbance, and interactions among the members.